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STATISTICAL BULLETIN
METROPOLITAN LIFE INSURANCE COMPANY

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Falls From Moving Passenger Automobiles

A PASSENGER riding in the back seat of an automobile that was moving at a speed of about 50 miles an hour noticed that one of the doors was not closed securely. In order to slam it shut, he opened it a little. As he did so, a rush of air caught it and swung it completely open, pulling him out of the vehicle. His head struck the ground, and he sustained injuries which cost him his life.

This incident is cited, not because of its unusual character, but because it is typical of a kind of automobile accident commonly lost sight of in the campaign against numerically more important classes of accidents, yet one in which far too many people lose their lives. Each year about 300 persons in the United States fall to their death through doors of moving passenger automobiles, opened deliberately in circumstances similar to those in the instance mentioned, or somehow opened accidentally. Children and adults are victims in about equal numbers, as the death claim records of Industrial policyholders of the Metropolitan Life Insurance Company show.

It is not necessary for the car to be going at a good clip for serious harm to be done. Passengers in the act of closing the door have been thrown out onto city streets from cars moving fairly slowly, while the driver was making a turn. The speed of the car, of course, is an important element in the case of injury sustained by striking the ground; but it is of little consequence if the victim happens to be thrown in front of an oncoming car.

Among adults, opening the door to slam it shut is an important cause of accidents. Leaning out too far in the effort to obtain a hold on the handle is a contributing factor in some accidents of this type. Doors have been accidentally opened by a passenger striking the handle while reaching over the front seat to get a package from the back of the car. A scuffle among the occupants has, in some cases, resulted in one of them being forced against the door handle and out of the car.

Children, if not watched, play with the handles of doors. They lean against them while trying to

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get a better view through the window, or bump against them in the rough and tumble games by which they relieve the tedium of the drive. In Life insurance experience these were the commonly reported causes of accidents of this kind in which children were injured. The number of cases in this experience is small, but, so far as they go, the records indicate that usually the injured children had been left to their own devices in the back seats of four-door cars while adults sat up front.

The chances of falling out of a car are far from negligible, and the resulting injuries are usually so severe that drivers should make it an invariable rule to see that all doors are closed tightly and that locking devices are set before starting the car. If a door must be closed after the car has started, the driver should be asked to slow down—preferably to stop—so that it may be closed without danger. Extraordinary precautions must be taken to prevent doors from opening accidentally when children are taken out riding. Whenever possible an adult should sit with them. There is apparently less danger of children falling out of two-door type cars than of four-door cars.

The Cumulative Effect of Successive Wars on Age Composition of Populations

LIKE two hammer blows, timed with ill-fated precision for greatest effect, the two major European wars of this century have come just about one generation apart, striking fathers, children, and children's children. This is not a figure of speech. It is a record written in the ranks of the population of the warring nations.

For, one of the tragedies of the present European conflict is that it bears most heavily on young men in their 20's, whose numbers are already far below normal because of the low birth rates during the last War, as described in the March number of the STATISTICAL BULLETIN. And the next generation, now about to be born, will suffer in number by the double blow dealt in the time of their fathers and their grandfathers. How deep and permanent are the scars of war is shown clearly in the charts on page 4, which give the age distribution for males and females separately in France, England, and Germany at the first census taken in each country after the War.*

The first feature to strike the eye in these curves is the sharp dip at the ages of early childhood, corresponding to the years of the very low birth rates during the World War, which was but recently concluded at the time of these censuses. The full force of this fall in the birth rate is realized from the fact that in France, in 1921, children at age 4 were no more numerous than men and wom-

*These effects can also be discerned in the figures of the latest censuses, but they are obscured by such factors as differential rates of mortality by sex and age, and by migration.

en of 65 years of age. Normally, they should have exceeded these elders about in the ratio of two to one. Indeed, the child population between ages 1 and 5, inclusive, was exceeded by every ensuing five-year age group of persons up to about 60. In Germany, likewise, the census of 1925 (four years later than the French census) showed that the number of children at age 7 was exceeded by the numbers at each higher age up to 52. Furthermore, the number of children in the four-year group of ages 6 to 9, was exceeded by every higher age group of similar range up to the group 49 to 52.

Since England's birth rate was less affected than that of the other major belligerents of the World War, the dip in the curve at the younger ages is less marked and a comparison with the numbers at older ages is not quite so unfavorable. Even in that country, however, the number of children at age 3 in 1921 was exceeded by persons at each higher age but one, until age 41 is reached.

The next notable feature of the curves for the several countries is the sharp drop among males at ages corresponding to those of the youngest troops engaged in the war. In France, at least, the toll among the very youngest troops was exceptionally heavy, considering the short period of time in which these men were fighting. For, the French census of 1921 showed that the number of young men of 20 was about the same as that at each single year of age in the late 20's, although the latter men had seen war service during practically the entire period of the War.

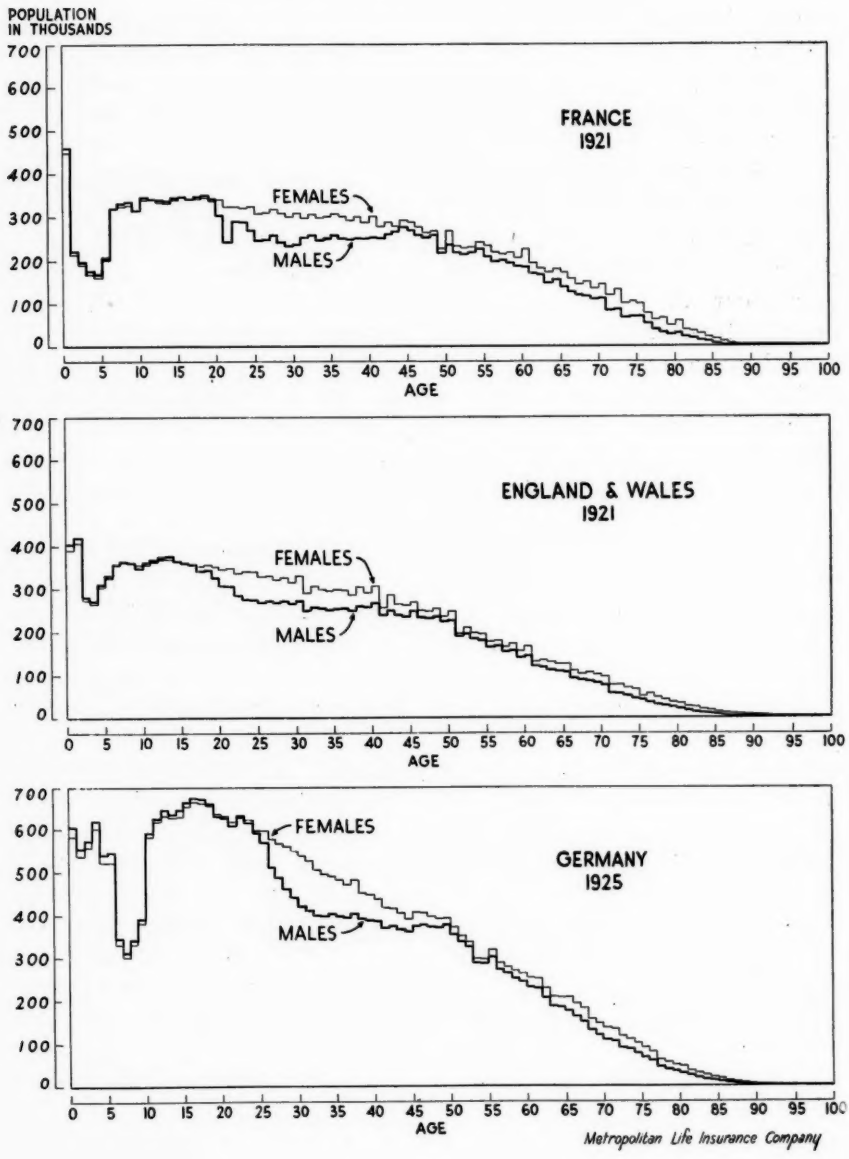
With relatively minor fluctuations, the age curve for French males is rather flat between ages 25 and 40. But from 40 almost up to 50, the numbers at each age rise gradually and exceed those of younger males in the late 20's and in the 30's. In contrast, French *women* show the gradual decline in numbers with age that is characteristic of the normal age distribution.

In general, the age curves for Germany and England show features similar to those described in the case of France. The figures for these two other countries, however, do not indicate as heavy a loss of life among the very youngest troops engaged in the War as was found in the case of France.

A notable item in the curves for both males and females in France is the sharp dip at age 49 which corresponds to the births in the period of the Franco-Prussian War, at which time the French birth rate fell sharply. A corresponding fluctuation will be found in the age distribution for Germany.

Among the effects of these abnormalities of the age curve is a relative surplus of women in a broad age range which covers the most productive period of life, and a definite increase in the proportion of older persons, particularly of older men. This trend to an increasing proportion of older persons has been reinforced by the decline in the birth rate in the interval between the two

AGE DISTRIBUTION OF POPULATION FRANCE, ENGLAND AND GERMANY AT FIRST POST WAR CENSUS



wars. The present War tends to give this trend still further impetus. For, the generation which now would normally be responsible for the greater number of births consists, in large part, of men and women born during or soon after the last War, whose numbers were distinctly subnormal, and the men of this group will be depleted still further by the present conflict. Indeed, although the number of casualties has thus far been relatively small, even by the mere withdrawal of many millions of men from civilian life, the War acts as an effective check on the birth rate.

War, a grave disaster at any time, is doubly so when it recurs on a large scale in the interval of one generation. Precisely this has happened in Europe. The current War threatens, therefore, to put off, for many decades, a recovery of normal balance of population in the countries engaged. Even if the War were to end immediately, so great has been the strain on the accumulated resources of European peoples because of the tremendous costs of the preparation for it, and actual operations even for this brief period, that Europe cannot escape severe economic repercussions which will be reflected, as in the past, in her birth rate. A long War will mean a poverty-stricken continent, with an extremely high proportion of old persons, and of women in the prime of life, either widowed or condemned to spinsterhood and childlessness.

The Risk of Widowhood and the Risk of Death Compared

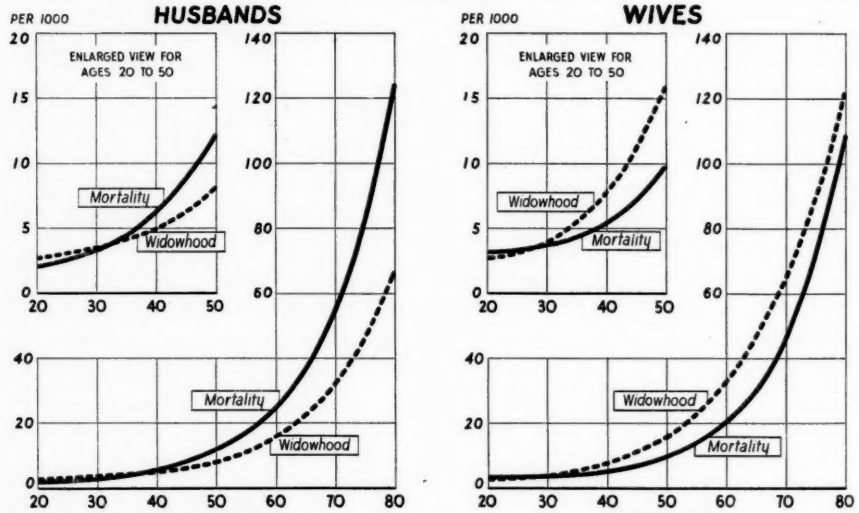
For a married woman the risk of widowhood is generally greater than the risk of death. For a man the reverse is the case. Two factors contribute toward this situation. In the first place, married men, with few exceptions, have a higher mortality rate than married women of the same age, so that where both partners are of like age it is more probable that the wife will lose her husband in the course of a year than that she will die herself. The second factor is that women, in the majority of cases, are married to men older than themselves. An exception to the general rule occurs for married people at very young ages. Here the risk of death within a year for the wife is slightly greater than the risk of widowhood. This is due in part to the hazards associated with maternity and in part to the fact that among very young couples there is usually less difference in age between husband and wife.

These general remarks can be supplemented by quantitative data. Requisite information on which to base computations is available for native white couples of Pennsylvania in the years 1929 to 1931. To facilitate the examination of the data they are shown graphically in the chart on page 6. The right-hand panel shows the number of

husbands dying within the course of a year per 1,000 wives of specified ages (dashed curve), and also the number of deaths occurring during the same term among the wives themselves (full curve). The left-hand panel contains the corresponding curves for the opposite sex.

It will be noted in the panel relating to wives (right-hand panel) that the dashed curve and the full curve cross at age 27. Wives at any age below this have, in general, a greater risk of death within the course of a year than have their husbands. The figures for some typical ages of wives may be cited as examples. Among married women at age 25 we find the death rate to be 3.50 per 1,000, while among the husbands of these women the death rate is 3.11 per 1,000. On the other hand, at age 35 the death rate for married women is 4.37 per 1,000, while that for their husbands, taken as a group, is 5.51 per 1,000. The corresponding rates at age 45 are 7.08 and 11.11 per 1,000. As a matter of fact, for ages of wives up to about 70 years the chances of widowhood increase more rapidly with advancing age than do the chances of death.

For males the situation is reversed. At ages over 34 the chances of death in the course of the year are greater than the chances of becoming a widower; below age 34 the chances of becoming a widower are greater than those of death. Con-



Data relate to native white married persons in Pennsylvania, 1929 to 1931

METROPOLITAN LIFE INSURANCE COMPANY

trary to the situation observed among women, for men the chances of death within a year increase more rapidly with advancing age than do the chances of becoming a widower. These facts are seen clearly in the left-hand panel of the chart.

Widowhood, whether for the wife or the husband, means a disrupted family, and if the separation comes at a relatively early age, it tends to limit the size of the family. Often it frustrates hopes and plans for children, who are deprived of the benefit of parental care. A certain amount of widowhood and orphanhood is inevitable, and where the blow will fall cannot be foretold. But a realization of the measure of the risks involved is an aid in planning, individually and socially, for eventualities that cannot be wholly avoided.

Mortality Experience of the First Three Months of 1940

NINETEEN-FORTY is developing into one of the best health years in the history of the many millions of people who are Industrial policyholders of the Metropolitan Life Insurance Company. There is, in fact, good prospect that the current year will set a new mark for low mortality in this important cross section of the population. The record of the winter months has been outstandingly favorable. Starting off in January with a lower death rate than had ever been recorded in this insured group for any previous January, there followed still another minimum for the month of February. Then March came along with the lowest mortality rate, with a single exception, for that month. As the result, the year-to-date death rate for the quarter year was only 8.54 per 1,000—or just above the previous minimum of 8.50, which was registered for the first three months of 1938.

During the first quarter of each year, almost without exception, the mortality rate reaches a higher level than at any other season. Hence, when deaths during the winter are relatively few, there is always excellent prospect that the record for the year as a whole will be good.

Such mortality data as are available for the general population of the United States for the first quarter of 1940 also indicate one of the best health years in the history of the country. Deaths in 88 major cities, at the close of March, were actually fewer by 194 than for the like part of 1939. In these same cities deaths of infants registered a drop of 7 percent as compared with last year's record. In the City of New York the cumulative death rate, at the end of March, had declined nearly 8 percent from the 1939 level and was lower by about 2 percent than the rate for the first quarter of 1938—the year in which the City recorded the lowest mortality in its history.

A striking item in the record for New York is a drop of 23.5 percent, since 1939, in the mortality of infants.

Sharp Drop in Deaths From Pneumonia

No single development in the entire history of public health is more noteworthy than the sharp drop in deaths from pneumonia which has been observed among both the white and the colored policyholders during the first quarter of the current year. It is true that throughout the decade which closed with 1939 there was a persistent downward trend in the pneumonia death rate among Metropolitan Industrial policyholders and that at the end of the decade the rate had been reduced 43 percent from the figure recorded at its beginning. In a single year — that is, from 1938 to 1939 — there was a decline of 15 percent, and in the January 1940 STATISTICAL BULLETIN we heralded this abrupt drop as "the most striking development of 1939 in the entire field of public health." Now, only three months later, we are able to announce a drop of 27 percent during the first quarter of 1940, as compared with the like period of 1939. As the winter months are the season of highest mortality from pneumonia, it is extremely probable that the decline for the entire year 1940 will be even greater than that recorded for the year 1939. This most recent improvement confirms us in the belief, expressed in the January STATISTICAL BULLETIN, "that the gains are permanent and that improvement in the future will be even greater than in 1937, 1938, or 1939."

Other Favorable Developments of 1940, to Date

Each of the four principal communicable diseases of childhood (measles, scarlet fever, whooping cough, and diphtheria) has caused fewer deaths so far this year than in the like part of 1939. Inasmuch as each registered a new minimum mortality rate last year, it is obvious that the prospect is good for another new low in the case of each of these diseases in 1940. The long-time downward trend of the death rate from tuberculosis is still in evidence, and a new low point is in prospect for the year. The improvement in 1940 to date, however, has been confined to the colored policyholders. Other causes of death to record lower death rates than ever before during the winter season were: Diarrheal diseases, appendicitis, puerperal conditions, and homicides.

There has been gratifying improvement so far this year in the record for automobile accidents. Fatalities of this type, however, do not reach their maximum until the late summer and the fall seasons, and it is possible that unfavorable developments then will offset the improvement shown for th winter months. This is precisely what happened in 1939; but even with the bad record of the latter half of last year, 1939 made the best record for automobile fatalities since 1926. It

Death Rates per 100,000 Persons Exposed. First Quarter of 1940 and 1939 Compared. By Color for Selected Causes. All Ages.*

Metropolitan Life Insurance Company.

Industrial Department. Weekly Premium-Paying Business

Causes of Death	Death Rates per 100,000 Persons Exposed*					
	Total		White		Colored	
	Jan.-Mar. 1940	Jan.-Mar. 1939	Jan.-Mar. 1940	Jan.-Mar. 1939	Jan.-Mar. 1940	Jan.-Mar. 1939
All Causes—Total	854.2	876.5	783.5	806.5	1391.5	1410.5
Typhoid fever	.5	.4	.4	.3	1.0	.8
Communicable diseases of childhood	3.9	6.1	4.2	6.2	2.0	5.4
Measles	.4	1.0	.4	1.1	—	.6
Scarlet fever	.8	1.2	.9	1.2	.4	1.2
Whooping cough	1.5	2.3	1.6	2.2	.8	2.8
Diphtheria	1.3	1.6	1.3	1.8	.8	.8
Influenza and pneumonia	73.6	97.1	62.5	87.2	157.9	172.2
Influenza	16.6	18.7	12.8	16.0	45.6	39.7
Pneumonia (all forms)	57.0	78.4	49.7	71.3	112.3	132.5
Bronchopneumonia	23.0	31.3	21.2	29.8	37.0	42.7
Lobar and undefined	34.0	47.1	28.6	41.5	75.3	89.8
Tuberculosis (all forms)	45.8	47.4	35.1	34.3	127.6	147.7
Tuberculosis of respiratory system	42.1	42.7	32.1	31.1	117.8	131.3
Syphilis	12.6	11.6†	7.6	6.8†	50.7	47.9†
Cancer (all forms)	104.9	101.9	103.6	101.3	115.3	106.0
Diabetes mellitus	33.5	30.1	32.9	29.8	38.0	32.9
Alcoholism	1.4	1.1	1.4	1.1	1.8	1.6
Cerebral hemorrhage	67.1	66.0	59.2	58.3	126.5	125.1
Diseases of the coronary arteries	52.6	43.7	53.8	44.9	43.5	34.9
Angina pectoris	3.5	7.9	3.5	8.1	3.1	6.4
Diseases of the heart (other forms)‡	182.5	183.0	170.1	170.6	276.9	277.8
Diarrhea and enteritis	3.7	4.9	3.5	4.9	5.1	5.0
Appendicitis	9.1	9.5	9.1	9.2	9.0	11.8
Chronic nephritis	63.8	58.3	53.4	50.8	142.6	115.4
Puerperal state—total	5.0	5.3	4.3	4.6	10.4	11.0
Total external causes	55.5	56.7	53.2	53.4	73.0	82.2
Suicides	8.0	8.3	8.5	8.6	4.3	5.4
Homicides	3.1	4.3	1.7	1.8	14.0	23.2
Accidents—total	44.4	44.2	43.0	43.0	54.7	53.5
Home accidents	14.8	14.2	13.8	13.3	22.2	20.4
Motor vehicle accidents	15.8	17.6	15.4	17.4	18.5	19.2
Automobile accidents**	14.7	16.6	14.4	16.3	16.9	18.6
All other causes of death	135.3	145.3	125.8	134.7	207.1	226.5

*The rates for 1939 and 1940 are subject to slight correction, since they are based on provisional estimates of lives exposed to risk.

†Excludes aneurysm of the aorta.

‡Excludes pericarditis, acute endocarditis, and acute myocarditis.

**Excludes collisions between automobiles and railroad trains or streetcars.

is confidently expected that when the record for 1940 is complete some further improvement will be shown.

The Unfavorable Side

Cancer, diabetes, and diseases of the coronary arteries registered new high mortalities in 1939, and the situation for each is still less favorable so far in 1940. The cardio-vascular-renal diseases, taken as a group, show a considerable rise from the mortality rate of the first quarter of 1939.

Our World's Fairs Exhibits

THE Metropolitan Life Insurance Company cordially invites readers of the STATISTICAL BULLETIN to attend its exhibits in the Business Systems and Insurance Building, New York World's Fair, beginning May 11, 1940, and in the Hall of Science, Golden Gate International Exposition, San Francisco, Calif., on and after May 25, 1940.

Health Record for March 1940

THE death rate for March 1940, for the Industrial policyholders, was 8.6 per 1,000. With a single exception (in March 1938, when a rate of 8.3 was registered) the mortality rate for this month, in 1940, was the minimum for this particular season of the year. The average rate for March over the 10-year period 1930-1939 was 9.4 per 1,000.

Health conditions in the general population of the United States during March were exceptionally favorable for this part of the year. The number of deaths reported by 88 major American cities was well below the number reported in March a year ago. The incidence of diphtheria and influenza was less than during either February of the current year or in March 1939. The prevalence of measles, scarlet fever, smallpox, typhoid fever, and whooping cough, while somewhat higher than that recorded in February, was appreciably below that in March of last year.

The following table shows the mortality among Industrial policyholders for March 1940, February 1940, and March 1939, together with the death rates for the first three months of each year.

METROPOLITAN LIFE INSURANCE COMPANY

Death Ratse per 100,000 Policyholders from Selected Causes. Industrial Department. Weekly Premium-Paying Business*

Causes of Death	Annual Rate per 100,000 Policyholders*				
	March 1940	February 1940	March 1939	Year to Date: End of March	
				1940	1939
All Causes—Total	858.3	871.7	900.3	854.2	876.5
Typhoid fever	.7	.2	.3	.5	.4
Measles	.4	.3	1.2	.4	1.0
Scarlet fever	.9	.8	1.1	.8	1.2
Whooping cough	1.4	1.6	2.6	1.5	2.3
Diphtheria	.7	1.5	.9	1.3	1.6
Influenza	15.4	19.4	28.4	16 6	18.7
Pneumonia (all forms)	54.9	63.9	82.0	57.0	78.4
Tuberculosis (all forms)	45.5	46.1	50.9	45.8	47.4
Tuberculosis of respiratory system	41.8	42.9	45.8	42.1	42.7
Syphilis	12.2	12.1	11.9†	12.6	11.6†
Cancer (all forms)	104.2	103.6	99.6	104.9	101.9
Diabetes mellitus	35.2	32.8	29.9	33.5	30.1
Cerebral hemorrhage	66.4	68.3	64.4	67.1	66.0
Diseases of the coronary arteries	51.1	50.6	43.1	52.6	43.7
Angina pectoris	3.0	4.0	7.4	3.5	7.9
Diseases of the heart (other forms)‡	186.3	186.0	180.2	182.5	183.0
Diarrhea and enteritis	3.6	3.5	4.3	3.7	4.9
Appendicitis	9.5	8.8	10.6	9.1	9.5
Chronic nephritis	66.0	61.1	59.9	63.8	58.3
Puerperal state—total	5.6	4.1	4.9	5.0	5.3
Suicides	8.6	7.5	7.1	8.0	8.3
Homicides	3.0	3.0	3.5	3.1	4.3
Accidents—total	37.0	46.3	40.2	44.4	44.2
Home accidents	11.5	14.8	14.9	14.8	14.2
Motor vehicle accidents	12.3	15.7	14.0	15.8	17.6
Automobile accidents§	11.3	14.8	13.1	14.7	16.6
All other causes of death	147.1	146.3	166.1	136.7	146.5

*The rates for 1939 and 1940 are subject to slight correction, since they are based on provisional estimates of lives exposed to risk.

†Excludes aneurysm of the aorta.

‡Excludes pericarditis, acute endocarditis, and acute myocarditis.

§Excludes collisions between automobiles and railroad trains or streetcars.

Correspondence on the subjects discussed in these Bulletins may be addressed to: The Editor,

Statistical Bulletin,
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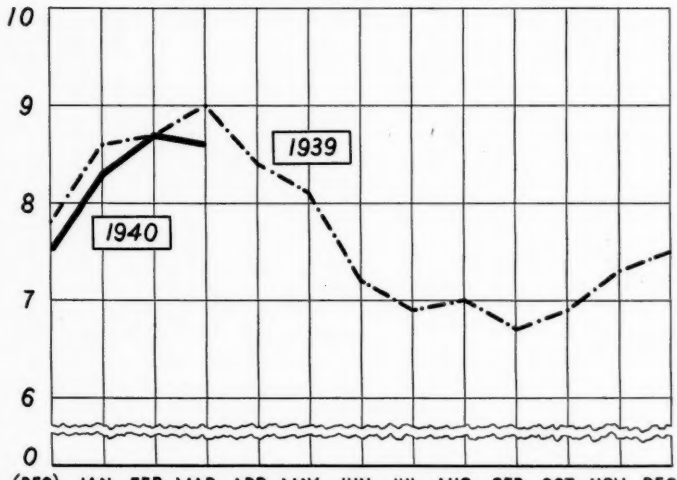
MORTALITY FROM ALL CAUSES

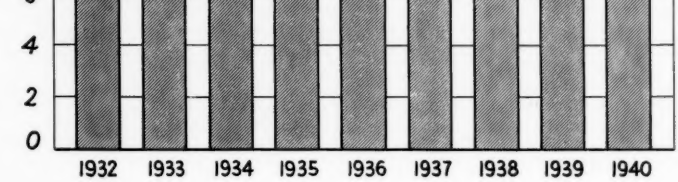
METROPOLITAN LIFE INSURANCE COMPANY
DEATH RATES PER 1,000 POLICYHOLDERS - ANNUAL BASIS
INDUSTRIAL DEPARTMENT · WEEKLY PREMIUM-PAYING BUSINESS

DEATH RATES BY MONTHS: 1939 AND 1940



(DEC)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1939	8.6	8.7	9.0	8.4	8.1	7.2	6.9	7.0	6.7	6.9	7.3	7.5
1940	8.3	8.7	8.6									

DEATH RATES FOR JANUARY TO MARCH, 1932 - 1940



Rates for 1939 and 1940 are Provisional

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